

Supplementary description of a female and two newly-recorded species in the subfamily Oedemerinae (Coleoptera: Oedemeridae) from China

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Abstract: The female of *Diplectrus bistigmaeus* Zhang, Ren et Ba, 2012 from Xizang was newly reported and supplementarily described. Two species of Oedemerinae were reported for the first time from China: *Nacerdes (Xanthochroa) brendelli* Švihla, 1987 and *N. (Asiochroa) mimoncomeroides* Švihla, 1998. The potential geographical distribution of these two species based on the known distribution was predicted by DIVA-GIS software.

Key words: false blister beetles; new record; geographical distribution

中国拟天牛亚科一雌性新描述与两新纪录种记述（鞘翅目：拟天牛科）

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摘要: 报道中国拟天牛亚科西藏 1 雌性新发现: *Diplectrus bistigmaeus* Zhang, Ren et Ba, 2012, 并对其进行描述。*Nacerdes (Xanthochroa) brendelli* Švihla, 1987 和 *N. (Asiochroa) mimoncomeroides* Švihla, 1998 两种首次在中国记录, 并基于 DIVA-GIS 对它们在中国的潜在分布区进行了预测。

关键词: 拟天牛; 新纪录; 地理分布

Introduction

The Oedemerinae Latreille, 1810 is the most speciose subfamily of the Oedemeridae and is comprised of five tribes: Asclerini Gistel, 1848, Ditylini Mulsant, 1858, Nacerdini Mulsant, 1858, Oedemerini Latreille, 1810 and Stenostomatini Mulsant, 1858 (Bouchard *et al.* 2011). All tribes had been recorded from China except for Stenostomatini, which only occurs in Europe, North Africa and Israel (Švihla 2008). The other four tribes are distributed in China. Until now, this subfamily contained about 1350 species in the world, with 116 known species in 21 genera from China (Schenkling 1915; Arnett 1951; Švihla 1986, 1987, 1991, 1993, 1996, 1997, 1998a, b, 1999, 2001, 2004, 2005, 2006, 2008, 2009, 2011; Tian *et al.* 2014). Švihla has made great contributions to the fauna of Chinese Oedemerinae, having published descriptions of many new species and new records from China (Švihla 1986, 1987, 1998a, 1998b, 2001, 2006, 2008, 2009, 2011; Švihla & Hideo 2009). But a comprehensive study of this subfamily

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from China still remains to be done.

In our recent study of the Chinese Oedemerinae, female specimens of *Diplectrus bistigmaeus* in the tribe Ditylini were collected in Xizang and were examined and described. Two species are reported for the first time from China: *Nacerdes (Xanthochroa) brendelli* Švihla, 1987 and *N. (Asiochroa) mimoncomeroides* Švihla, 1998. The genus *Nacerdes* Dejean, 1834 is the most speciose genus in the tribe Nacerdini. Until now, *Nacerdes* contained 23 known species in Chinese fauna (Švihla 2008).

Material and methods

Specimens were examined and described using a Nikon (SMZ800) dissecting microscope. Measurements and photographs were carried out under a Leica (M205 A) dissecting microscope. Photographs were processed using Adobe Photoshop CS3. Body length is measured from the anterior margin of the clypeus to the elytral apex. Body width is measured across the humeral part of elytra. All measurements are in millimeters. Prediction of the potential geographical distribution of the two newly recorded species is extrapolated from the known distribution using DIVA-GIS software. The bioclimatic models used are those embedded in the DIVA-GIS software. Environmental data are from WorldClim (<http://www.worldclim.org/>). Specimens examined are deposited in the Museum of Hebei University (MHBHU).

Taxonomy

1. *Diplectrus bistigmaeus* Zhang, Ren et Ba, 2012 (Figs. 1, 2)

Diplectrus bistigmaeus Zhang, Ren et Ba, 2012: 406.

Type locality. China (Xizang).

Type specimen examined. 1♂ (Holotype), “Xizang, Mêdog 108K, 800–1100 m, 17-VIII-2003, Guodong REN leg.” (MHBHU)

Other examined specimens. 2♂2♀, Xizang, Mêdog, Hanmi, 28-VI-2013, Xinglong BAI & Junsheng SHAN leg. (light trap); 1♀, Xizang, Zayu, 06-VIII-2013, Xinglong BAI & Junsheng SHAN leg.

Female (Fig. 1). Body length 21.3–23.7 mm, body width 4.2–6.7 mm. Head sepia except frons and vertex yellow, black around eyes, mouthparts terra-cotta to sepia. Antennae sepia, segments gradually lightening to terra-cotta. Pronotum yellow, each side with a black marking near middle of lateral margin. Thorax, abdomen, basal 2/3 of femora yellow, tibiae and tarsi sepia. Elytra terra-cotta.

Eyes smaller and less projecting than in male, head across eyes only very slightly wider than pronotum. Antennae slightly exceeding 1/2 of elytral length. Surface of head very finely and sparsely punctuate with brown pubescence, lustrous. Pronotum slightly cordiform, anterior and prebasal depressions slightly indicated. Surface of pronotum punctuate and pubescent like that of head, lustrous. Elytra relatively wider than in male. Pygidium exceeds last sternite as in Fig. 2.

Distribution. China (Xizang).

Remarks. The genus *Diplectrus* Kirsch, 1866 belongs to the tribe Ditylini. So far, five species have been recorded from China (Zhang *et al.* 2012). This species is similar to *D. longipennis* Fairmaire 1896, but differs from the latter by the following characters: pronotum yellow, each side with a black marking near middle of lateral margin, parameres not dilated before apices, projection of urite emarginated on outer margin (Zhang *et al.* 2012). Female differs from male by smaller eyes, shorter antennae and wider elytra.

2. *Nacerdes (Xanthochroa) brendelli* Švihla, 1987 (Figs. 3, 4), new record to China

Nacerdes (Xanthochroa) brendelli Švihla, 1987: 11; Švihla, 2008: 363.

Specimens examined. 3♂1♀, Xizang, Mêdog, Hanmi, 28-VII-2013, Xinglong BAI & Junsheng SHAN leg. (light trap); 2♂2♀, Xizang, Mêdog, 108K, 17-VIII-2003, Guodong REN leg.; 2♀, Xizang, Zayu, Shangzayu, 14-VII-2005, Aimin SHI leg.

Distribution. China (Xizang); Nepal; India.

Remarks. This species is very similar to *N. (X.) fuscipennis* Champion, 1927, the male of this species can be easily distinguished according to shorter antennae and quite different male genitalia. Female has a more narrowed head behind eyes and a different shape to the last abdominal segment (Švihla 1987).

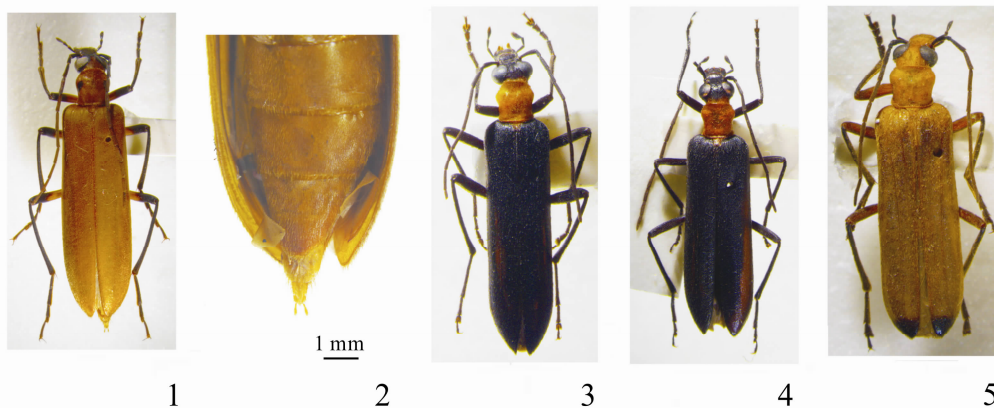
3. *Nacerdes (Asiochroa) mimoncomeroides* Švihla, 1998 (Fig. 5), new record to China

Nacerdes (Asiochroa) mimoncomeroides Švihla, 1998b: 60.

Specimens examined. 4♀, Xizang, Zayu, 22-VII-2009, Guodong REN leg.

Distribution. China (Xizang); Northern Thailand.

Remarks. This species is similar and closely related to *N. (A.) violaceonotata* Pic, 1922, from which it differs by apical half of last abdominal segment dark, frons between eyes as wide as width of antennomere II, and the different shape of aedeagal apicale (Švihla 1998).



Figures 1–5. 1, 2. *D. bistigmaeus* Zhang, Ren et Ba, 2012. ♀. 3, 4. *N. (X.) brendelli* Švihla, 1987. 3. ♂; 4. ♀. 5. *N. (A.) mimoncomeroides* Švihla, 1998, ♀. 1, 3, 4, 5. Habitus; 2. Last sternite.

Discussion

Our study suggests that the optimal potential distribution of *N. (X.) brendelli* Švihla, 1987 extends to southern Xizang, the northern part of Yunnan, and the southern part of Sichuan,

Nepal and Bhutan (Fig. 6). This is largely based on the similarity of habitat, elevation, and vegetation among the Southeast part of Xizang, Nepal, Bhutan and Hengduan Mountain (Yunnan, Sichuan). As seen in Fig. 7, the potential distribution of *N. (Asiochroa) mimoncomeroides* Švihla, 1998 is only northern Thailand, probably because our study only considers the climatic factors such as temperature and rainfall, but does not refer to the biological factors of human disturbance, interspecific competition and so on. More complete and accurate data still needs to be collected through further field investigations.

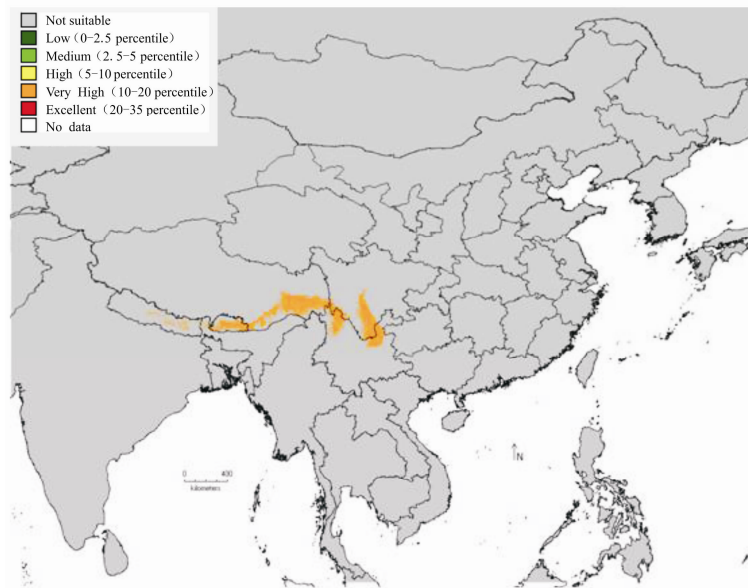


Figure 6. Potential geographical distribution of *N. (X.) brendelli* Švihla, 1987.

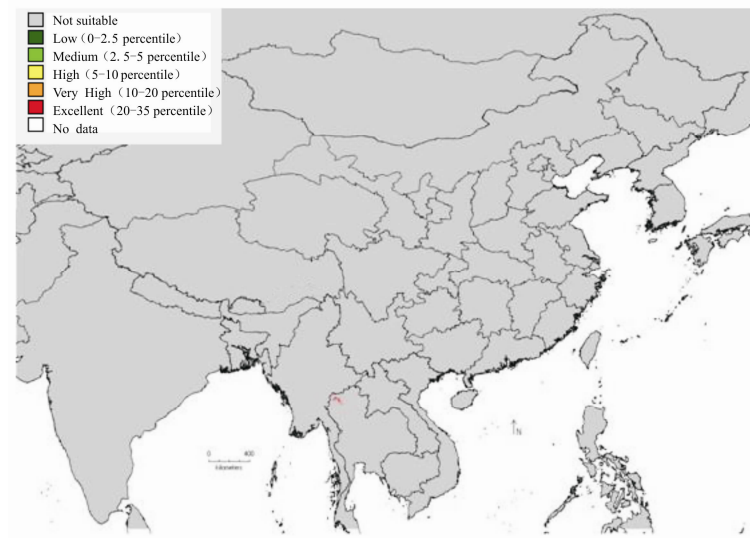


Figure 7. Potential geographical distribution of *N. (A.) mimoncomeroides* Švihla, 1998.

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